1 — INITIALIZE DATABASE AND APPROVED LIST

2 — RECEIVE DATAGRAM

3 — IDENTIFY DATAGRAM TYPE

4 — IF ATM SIGNALLING, ALLOW ACCESS, RECORD, AND COMPARE CONNECTION REQUEST TO DATABASE

5 — IF CONNECTION REQUEST APPROVED, ADD IT TO APPROVED LIST AND RETURN TO STEP 2, OTHERWISE, JUST RETURN TO STEP 2

6 — IF ATM DATA AND ON APPROVED LIST, ALLOW ACCESS, RECORD, RETURN TO STEP 2

7 — IF ATM DATA AND NOT ON APPROVED LIST, REJECT DATAGRAM AND RETURN TO STEP 2

FIG. 1
(PRIOR ART)

20

21

22 → FLOW MANAGEMENT UNIT ← 23

24

25

ATM APPROVED
LIST STORAGE UNIT

34

MEMORY MANAGEMENT
UNIT

28

26

ATM FLOW PROCESSOR

35

MEMORY UNIT 36

27

29

FLOW COMMAND
PROCESSOR

30

ATM SIGNALLING
FLOW PROCESSOR 31

32

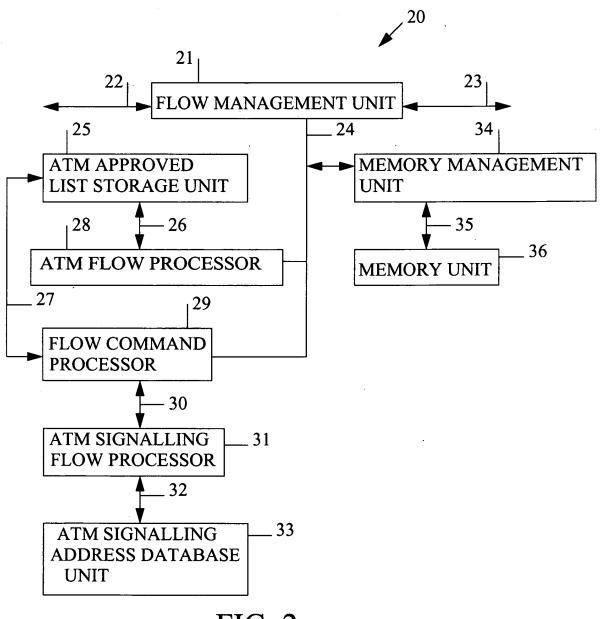ATM SIGNALLING
ADDRESS DATABASE
UNIT 33

FIG. 2
(PRIOR ART)

41 — INITIALIZE DATABASE, APPROVED LIST, AND DISAPPROVED LIST

42 — RECEIVE IP DATA PACKET

43 — COMPUTE FLOW TAG USING IP DATA PACKET

44 — DISCARD IP DATA PACKET AND RETURN TO STEP 42 IF FLOW TAG ON DISAPPROVED LIST

45 — ALLOW IP DATA PACKET ACCESS AND RETURN TO STEP 42 IF FLOW TAG ON APPROVED LIST

46 — COMPARE FLOW TAG TO DATABASE IF FLOW TAG NOT ON APPROVED LIST OR DISAPPROVED LIST

47 — DISCARD IP DATA PACKET, ADD FLOW TAG TO DISAPPROVED LIST, AND RETURN TO STEP 42 IF FLOW TAG NOT APPROVED BY DATABASE

48 — ALLOW IP DATA PACKET ACCESS, ADD FLOW TAG TO APPROVED LIST, AND RETURN TO STEP 42 IF FLOW TAG APPROVED BY DATABASE

FIG. 3

71	EXTRACT IP SOURCE ADDRESS, IP DESTINATION ADDRESS, IP PROTOCOL, DATA, AND ANY UPPER LAYER PROTOCOL HEADER FROM IP DATA PACKET
72	SET FLOW TAG FIELD FOR THE UPPER LAYER PROTOCOL HEADER TO ZEROS IF NO SUCH HEADER WAS EXTRACTED
73	SET A USER-DEFINABLE NUMBER OF BIT LOCATIONS OF THE FLOW TAG TO ZERO
74	COMPUTE FLOW TAG ADDRESS

FIG. 4

75	COMPARE FLOW TAG TO DATA STORED ON IP DISAPPROVED LIST, IF ANY, AT FLOW TAG ADDRESS
76	IF FLOW TAG MATCHES DATA THEN ON LIST, OTHERWISE NOT ON LIST

FIG. 5

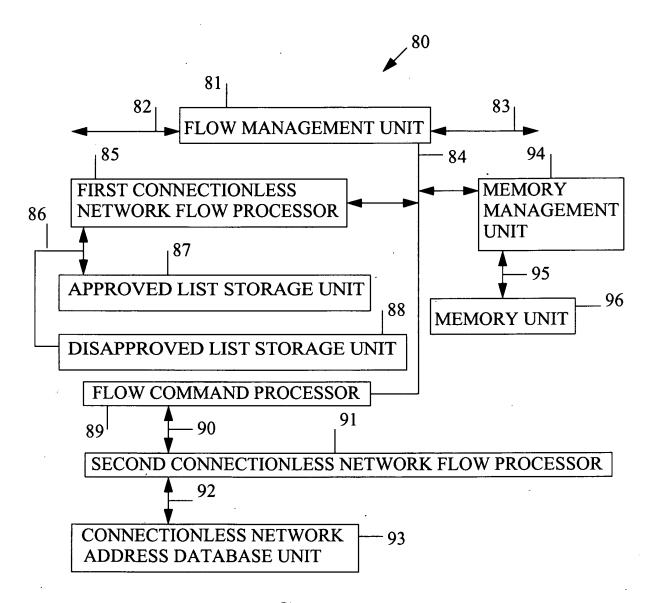| 78	COMPARE FLOW TAG TO DATA STORED ON IP APPROVED LIST, IF ANY, AT FLOW TAG ADDRESS
79	IF FLOW TAG MATCHES DATA THEN ON LIST, OTHERWISE, NOT ON LIST

FIG. 6

80

81

82 → FLOW MANAGEMENT UNIT ← 83

84

85 — FIRST CONNECTIONLESS NETWORK FLOW PROCESSOR

94 — MEMORY MANAGEMENT UNIT

86

87 — APPROVED LIST STORAGE UNIT

95

88 — DISAPPROVED LIST STORAGE UNIT

96 — MEMORY UNIT

FLOW COMMAND PROCESSOR

89   90

91 — SECOND CONNECTIONLESS NETWORK FLOW PROCESSOR

92

93 — CONNECTIONLESS NETWORK ADDRESS DATABASE UNIT

FIG. 7